

# Active Recombinant Human CYP3A7 Protein

**Cat. No.** CYP3A7-05H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Product Overview</b> | <p>Recombinant human CYP3A7 and human CYP-reductase without tag was coexpressed in Escherichia coli.</p> <p>Amount: 0.5 nmol cytochrome P450</p>                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>      | <p>This gene encodes a member of the cytochrome P450 superfamily of enzymes, which participate in drug metabolism and the synthesis of cholesterol, steroids and other lipids. This enzyme hydroxylates testosterone and dehydroepiandrosterone 3-sulphate, which is involved in the formation of estriol during pregnancy. This gene is part of a cluster of related genes on chromosome 7q21.1. Naturally-occurring readthrough transcription occurs between this gene and the downstream CYP3A51P pseudogene.</p>                                        |
| <b>Bio-activity</b>     | <p>Cytochrome c Reductase Activity: 667 nmol/min/mg protein</p> <p>P450 Activity Data(Unless otherwise stated, all assays are carried out at 37 centigrade in 100 mM potassium phosphate buffer (pH 7.4) containing 5 mM magnesium chloride and an NADPH generating system [5 mM glucose 6-phosphate, 1 mM NADP+, 1 U/ml glucose 6-phosphate dehydrogenase])</p> <p>Activity: Testosterone 6<math>\beta</math>-hydroxylase</p> <p>Linear with time up to: 8 min(Determined at 32 <math>\mu</math>M substrate, using a P450 concentration of 50 pmol/ml)</p> |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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|                         | <p>Linear with P450 up to: 60 pmol/ml(Determined at 32 <math>\mu</math>M substrate, using an incubation time of 10 min)</p> <p>Vmax: 2.2 pmol/min/pmol CYP</p> <p>Km: 13 <math>\mu</math>M</p>                                                                                                                                                                                                                  |
| <b>Usage</b>            | For laboratory (research) purposes only.                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Storage</b>          | Store at -80 centigrade. Avoid frequent temperature changes. Thaw on ice.                                                                                                                                                                                                                                                                                                                                       |
| <b>Concentration</b>    | <p>P450 Concentration: 1.0 nmol/ml</p> <p>Protein Concentration: 10.0 mg/ml</p> <p>Specific P450 Content: 100 pmol/mg protein</p>                                                                                                                                                                                                                                                                               |
| <b>Storage Buffer</b>   | 50 mM Tris-acetate (pH 7.6), 250 mM sucrose, 0.25 mM EDTA                                                                                                                                                                                                                                                                                                                                                       |
| <b>GENE INFORMATION</b> |                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Gene Name</b>        | CYP3A7 cytochrome P450 family 3 subfamily A member 7 [ Homo sapiens (human) ]                                                                                                                                                                                                                                                                                                                                   |
| <b>Official Symbol</b>  | CYP3A7                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Synonyms</b>         | <p>CYP3A7; cytochrome P450 family 3 subfamily A member 7; CP37; CYP11A7; P450HLP2; P450-HFLA; P-450111A7; P-450(HFL33); cytochrome P450 3A7; aryl hydrocarbon hydroxylase; cytochrome P450, family 3, subfamily A, polypeptide 7; cytochrome P450, subfamily IIIA, polypeptide 7; cytochrome P450-HFLA; flavoprotein-linked monooxygenase; microsomal monooxygenase; xenobiotic monooxygenase; EC 1.14.14.1</p> |
| <b>Gene ID</b>          | 1551                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>mRNA Refseq</b>      | NM_000765                                                                                                                                                                                                                                                                                                                                                                                                       |

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| Protein Refseq | NP_000756 |
| MIM            | 605340    |
| UniProt ID     | P24462    |

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